SEX WORK

Pursuing scale and quality in STI interventions with sex workers: initial results from Avahan India AIDS Initiative

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Background: Migration, population mobility, and sex work continue to drive sexually transmitted epidemics in India. Yet interventions targeting high incidence networks are rarely implemented at sufficient scale to have impact. India AIDS Initiative (Avahan), funded by the Bill and Melinda Gates Foundation, is scaling up interventions with sex workers (SWs) and other high risk populations in India's six highest HIV prevalence states.

Methods: Avahan resources are channelled through state level partners (SLPs) to local level non-governmental organisations (NGOs) who organise outreach, community mobilisation, and dedicated clinics for SWs. These clinics provide services for sexually transmitted infections (STIs) including Condom Promotion, syndromic case management, regular check-ups, and treatment of asymptomatic infections. SWs take an active role in service delivery. STI capacity building support functions on three levels. A central capacity building team developed guidelines and standards, trains state level STI coordinators, monitors outcomes, and conducts operations research. Standards are documented in an Avahan-wide manual. State level STI coordinators train NGO clinic staff and conduct supervision of clinics based on these standards and related quality monitoring tools. Clinic and outreach staff report on indicators that guide additional capacity building inputs.

Results: In 2 years, clinics with community outreach for SWs have been established in 274 settings covering 77 districts. Mapping and size estimation have identified 187 000 SWs. In a subset of four large states covered by six SLPs (183 000 estimated SWs, 65 districts), 128 326 (70%) of the SWs have been contacted through peer outreach and 74 265 (41%) have attended the clinic at least once. A total of 127 630 clinic visits have been reported, an increasing proportion for recommended routine check ups. Supervision and monitoring facilitate standardisation of services across sites.

Conclusion: Targeted HIV/STI interventions can be brought to scale and standardised given adequate capacity building support. Intervention coverage, service utilisation, and quality are key parameters that should be monitored and progressively improved with active involvement of SWs themselves.

Migration, population mobility, and sex work continue to drive sexually transmitted epidemics in India as elsewhere.[1] Yet interventions targeting networks with the highest HIV incidence are rarely implemented at sufficient scale to have public health impact.[2] For the South East Asia region, for example, only an estimated 19% of sex workers (SWs), 5% of injecting drug users, and 1% of men who have sex with men have access to even basic prevention services.[3]

In India, reports from the early 1990s found high HIV prevalence among migrant populations, sex workers, their clients, and patients with sexually transmitted infections (STI), particularly those with genital ulcers.[4–7] Less than a decade later, six states had surpassed 1% antenatal HIV prevalence, with some districts reporting over 3%.[8] Sex work continues to drive existing epidemics while helping to seed new ones in mobile, highly vulnerable communities. In 2000, cross sectional, population based surveys identified variable but high levels of STIs and HIV: in coastal Andhra Pradesh, 68.2% of sex workers had at least one curable STI and 48.5% were HIV positive. Among long distance truck drivers and helpers surveyed in southern states, 10.7% had a genital ulcer and 10.9% HIV.[9–11]

Since 2003, the India AIDS Initiative (Avahan), with funding from the Bill and Melinda Gates Foundation, has been working to scale up HIV prevention interventions in six high prevalence states. Additional interventions address clients and partners of sex workers, injecting drug users and their partners, and truck drivers along national highways.

This paper focuses on Avahan STI interventions with sex workers—female, male, and transgender—and outlines implementation challenges and attempted solutions during the initial scale-up phase of clinic and community based interventions. We describe STI capacity building inputs, present interim process and outcome data on key scale-up parameters, and discuss plans for strengthening these initial efforts.

THE CHALLENGE OF SCALE

The population living in India's six high prevalence states was 291 million in 2001. To reduce HIV transmission in these states, effective public health interventions would need to be supported on a massive scale.

Early on, Avahan identified priorities for strengthening the prevention response, including saturating coverage of SW populations, fostering community mobilisation, providing a comprehensive package of services, and improving data collection. To address these areas, the Avahan design provides funding through separate subprojects for (1) direct

Abbreviations: ART, antiretroviral treatment; CLSI, community led structural interventions; DIC, drop-in centres; FHI, Family Health International; MSM, men who have sex with men; NGOs, non-governmental organisations; SACS, state AIDS control societies; SLPs, state level partners; STI, sexually transmitted infections; SWs, sex workers; TAI, Tamil Nadu AIDS Initiative

implementation of interventions; (2) capacity building of implementing agencies in community mobilisation, communication, and clinical interventions; and (3) monitoring and evaluation.

For direct implementation of interventions, Avahan works through state level non-governmental organisation (NGO) partners who in turn contract with local NGOs to organise peer outreach, community mobilisation, and dedicated clinics for SWs. The primary target populations for interventions are SWs, their clients and regular partners. Through other funding mechanisms, high risk males are reached through hot spot interventions, occupation group stratification, and condom social marketing.

Initial estimates and targets were developed and later refined based on local mapping and size estimation using several methodologies. A total of 116 districts were chosen for interventions taking into account both prevalence and existing coverage, including an estimated 267 000 SWs. The typology of sex work was found to vary greatly within and across states, however, requiring local adaptation of strategies and targets. Approaches appropriate for female, male, and transgender SWs in a range of urban and rural settings, including brothels, lodges, pilgrimage sites, street, and home based, were needed.

Ensuring quality at this scale was a priority for planners and collaborating state AIDS control societies (SACS). NGO implementing partners generally had little experience organising STI interventions or, frequently, clinical services of any kind. State level NGO partners were chosen based on demonstrated ability to manage large HIV, STI, or reproductive health programmes, but few had ever developed clinical services for SWs. National STI guidelines were based on World Health Organization (WHO) syndromic standards, but did not include specific protocols for SWs. Even less guidance was available on how to provide services for male or transgender SWs.

Initial capacity building needs were thus to define an essential STI service package, to develop clear standards and tools, and to provide the necessary support to enable partners to scale up high quality services in diverse settings. An added challenge was to do this retrospectively, as most state level partners had already started establishing clinics and training staff months before STI capacity building support was in place.

DEVELOPING AN ESSENTIAL STI SERVICE PACKAGE

Avahan's STI strategy aims to reduce the prevalence of common curable STIs that facilitate HIV transmission, and to reinforce general STI/HIV prevention efforts in doing so. Peer outreach, community mobilisation, promotion of condoms and STI services have been effective elsewhere in decreasing STI/HIV rates among SWs.[12] The challenge was how to scale up such interventions rapidly while ensuring quality.

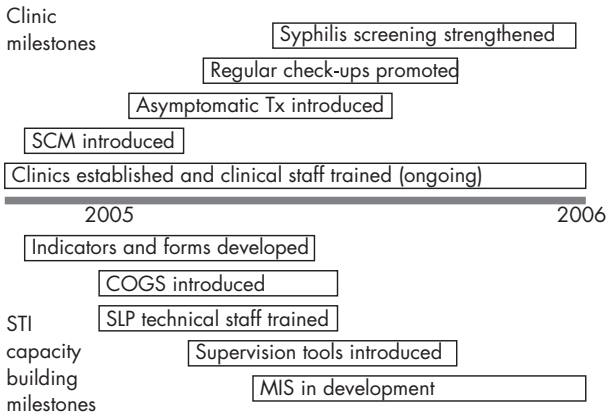

Figure 1 STI capacity building timeline.

Project clinics are expected to provide an "essential service package" for SWs designed to recognise and treat curable STIs and reinforce condom use. The main case management components of the services are syndromic case management, regular screening, and presumptive treatment for asymptomatic infections. Regular screening involves promotion of monthly check-ups for SWs to detect signs of STI by speculum/bimanual examination, and twice yearly serological testing and treatment for syphilis. Presumptive STI treatment (azithromycin plus cefixime) is recommended quarterly. While monthly check-ups are promoted, the programmatic target is at least one clinic visit per SW every 3 months.

State level partners and local level NGOs adapt the essential service package to local conditions; mapping and micro-planning are carried out to identify sites and methods—appropriate outreach, fixed or satellite clinics, health camps, mobile services—to maximise coverage and access. These clinical services are linked to peer based outreach in order to promote utilisation, reinforce prevention, and facilitate follow up and partner treatment.

Clinic and outreach services are provided within the context of community led structural interventions (CLSI), which builds active involvement and ownership of SWs in all aspects of interventions. This includes progressively increasing participation of SWs in (1) daily clinic activities related to medical visits and clinic administration, (2) management of drop-in centres (DIC), (3) peer outreach and education in the community, and (4) building a supportive environment through community based organisations, self help groups, and income schemes. Additional capacity building support for CLSI is provided by Care International.

CAPACITY BUILDING TO SUPPORT SCALE UP

STI capacity building support is provided by Family Health International (FHI) in collaboration with the World Health Organization (WHO). The aim is to build capacity of state level partners to provide effective STI services. Technical assistance is organised on three levels. A central STI capacity building team develops guidelines, standards, and tools; trains and supports STI technical coordinators working for the state level partners; monitors outcomes and conducts operations research. State level STI coordinators train their NGO clinic staff and conduct supervision based on these standards and related quality monitoring tools. Clinic and outreach staff report on indicators that guide additional capacity building inputs. The sequence of major STI capacity building activities is illustrated in figure 1.

A manual, *Clinic Operational Guidelines and Standards* (COGS), was developed which defines common approaches for STI prevention, detection and care, and standards of service delivery for dedicated SW clinics. Realistic standards were developed based on participatory assessments, field experience, existing national guidelines, and expert inputs. The COGS forms the basis for training and supervision and serves as a benchmark against which performance of clinics can be monitored. The manual addresses STI clinic operations (set-up, staffing, community involvement, coordination with outreach, logistics support); clinical management with detailed protocols and standards; health education and counselling; laboratory support; infection control; ethical standards, confidentiality and right of refusal; monitoring, evaluation, and reporting; and technical support and supervision. Explicit recommendations on counselling of SWs, HIV testing, and referral linkages including HIV related support services are included.

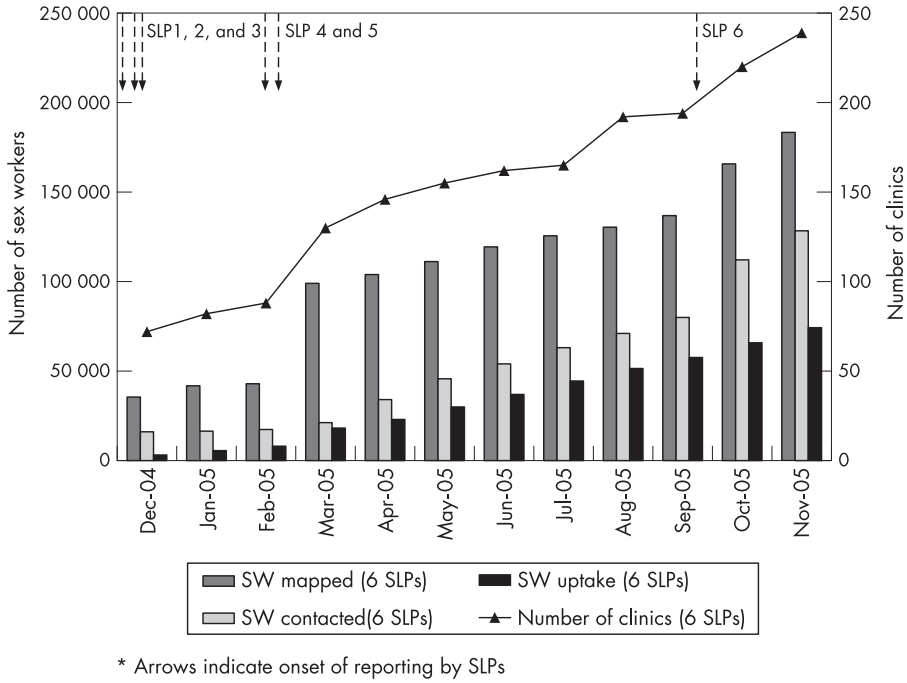

Figure 2 Outreach contacts and new clinic visits in relation to number of clinics and estimated SW populations (*six state level partners).

The COGS, along with tools for training, supervision and monitoring, was introduced during training of state level technical coordinators. STI capacity building staff make field visits at least quarterly to each state level partner, during which joint supervisory visits to clinics are made. The primary purpose of these visits is to reinforce the capacity of state level technical coordinators to provide support and supervision to frontline service providers, rather than to attempt to provide that support directly. The state level technical coordinators, responsible for up to 20 clinics, are expected to visit each clinic monthly. During these visits, mentoring and supervision are carried out to improve performance of the clinical teams.

SCALE-UP PROGRESS AND A FIRST LOOK AT KEY INDICATORS

Since October 2003, clinic and community based interventions for SWs have been progressively built up in 77 districts. In most of these, mapping and size estimation have been carried out to identify sites where sex work is negotiated or takes place, to estimate numbers of SWs and to plan local interventions.

Avahan intervention areas currently include an estimated 187 000 SWs. This represents an estimated 30% to 65% of female SWs in the six states; together with interventions of government and other donors, estimated state coverage is 85–90%. Avahan intervention areas include about 40 000 male and transgender SWs, for estimated state-wide coverage of 60–70%. In one large state with an estimated 33 000 SWs, 9000 (27%) are male or transgender.

As of December 2005, 294 fixed and satellite clinics for SWs, linked to outreach and community mobilisation were operational. Avahan partners continue to identify more dispersed communities with smaller numbers of SWs, and attempt to extend services to reach them. This requires flexibility in programming and service delivery including part time satellite clinics, mobile units, and temporary health camps. Despite these challenges of diversity and scale, services are increasingly standardised; state level partners base services on uniform clinical protocols, follow COGS standards and are using comparable monitoring and supervision tools. Box 1 describes standardisation of STI services in one state.

Data on scale-up indicators are currently reported differently by different state level partners as a result of different management and service delivery approaches. Adoption of standard definitions of core indicators; methods for tracking individual patients at STI clinics; and use of a web based reporting system of core indicator data, including patient level records, are under way. At this stage, however, available indicators reported by state level partners include the following:

- *Outreach contacts* are currently reported as either first time contacts or registration of new SWs. Several contacts with a peer worker may be needed before the SW agrees to participate in the intervention; s/he is then given a registration card with a unique number (pseudonyms are commonly used).
- *Uptake* of clinic services is tracked in a more consistent way across state projects. Clinics report the number of SWs attending the clinic for the first time, extracting data from clinic registers.
- *Continuation* is measured differently across sites. All clinics report repeat visits, and ratios of repeat to new visits can be calculated. Some sites report clinic visits for routine checkups separately.

Despite differences in current reporting, some patterns and trends emerge from the data of four large states (Andhra Pradesh, Karnataka, Maharashtra, and Tamil Nadu). Issues related to access and utilisation include the following.

How many SWs are being reached compared to the estimated population?

Using either first contact or registration data from six SLPs (183 000 estimated SWs in 65 districts), 128 326 (70%) have been contacted at least once through peer outreach.

Box 1 Standardising clinical services in Tamil Nadu

Tamil Nadu AIDS Initiative (TAI), an Avahan state level partner, developed its STI programme with input from state experts, key populations (sex workers (SWs), men who have sex with men (MSM), and transgenders) and the Avahan STI capacity building team.

Forty programme clinics are operational near places where key populations (estimated 33 000) live and work. Standardisation is achieved by contracting with two medical college affiliated agencies, which manage STI clinics in collaboration with implementing NGO partners and communities. Technical training is on site and hands on, and includes training on attitudes and communication skills of clinic staff.

TAI clinics are closely linked to community outreach and have drop-in centres (DICs) attached. In many sites, female, male, and transgender SWs share clinic/DICs; in some larger sites, separate services are organised for MSM/transgenders. In all, coordination meetings involving clinic and community staff are held every 1–2 weeks to motivate and coordinate outreach work as well as to keep clinic staff informed about community attitudes. Doctors and nurses hold regular community dialogues and the community is involved in monitoring clinic quality.

Assessments by the STI capacity building team have found STI management to be highly standardised across sites with COGS based systems in place, records complete and accurate, and supportive supervision conducted by TAI technical coordinators and management agencies. In addition, innovative steps are being taken to improve quality and promote high levels of utilisation. Seventy per cent of SWs contacted by peers (58% of total population estimate) have attended clinic at least once and this indicator is closely followed by NGO peer outreach workers and clinic teams.

Summary prepared by Dr Lakshmi Bai and the TAI STI team

Are SWs coming to the clinic?

Based on first visit data from clinic registers, 74 265 SWs have attended clinic at least once. This represents 58% of SWs contacted by peer workers or 41% of the estimated SW population in the intervention districts (fig 2).

Continuation is more difficult to describe without individual patient tracking. A total of 127 630 clinic visits have been reported. Among five SLPs (132 000 estimated SWs in 51 districts) reporting 50 748 new clinic visits, a total of 90 025 clinic visits have been made (0.8 return visits per SW) during the first year. This crude ratio is increasing as more SWs return for recommended routine check-ups.

Data from five SLPs describe 51 637 STI related syndromic diagnoses, 48% with vaginal discharge, 18% with lower abdominal pain (presumptive pelvic inflammatory disease), 8% with genital ulcers, and 27% with other diagnoses. A significant declining trend of ulcerative STIs ($p<0.0001$) relative to other syndromes is apparent (fig 3).

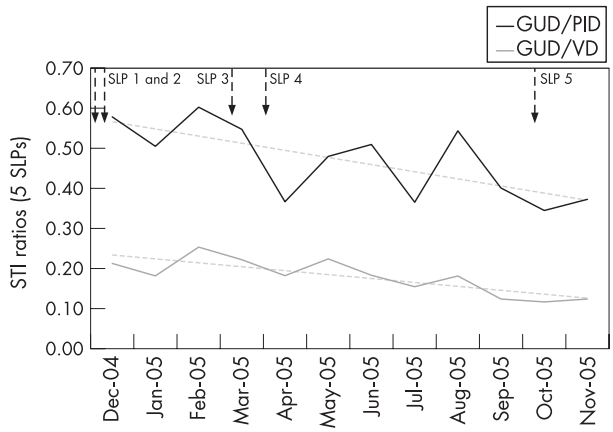

Figure 3 Proportion of ulcerative to non-ulcerative STI syndromes (five SLPs).

LOOKING FORWARD

In 2 years, Avahan partners have made measurable progress. Large numbers of SWs are being reached by peer outreach workers and many have attended the clinic at least once. Despite rapid scale up, however, potential impact at this early stage is limited by partial uptake of services and variable rates of continuation. For example, the recommended monthly schedule of clinic visits is far from being reached, although many sites are approaching a more realistic programmatic target of one clinic visit per quarter.

Quality has not yet been adequately measured although progressive improvement has been documented at capacity building visits. Moreover, analysis of clinic data suggests some positive trends; ulcerative STIs, prevalent among underserved SWs in India, are declining relative to other STI syndromes. Ongoing surveillance will help to validate these trends.

Meanwhile, a platform has been established for reaching the highest risk and most vulnerable populations. Looking forward, a number of new capacity building challenges can be seen as the focus shifts to consolidation and improvement of services.

Continued *scale-up support* will be needed as partners establish new clinics and outreach to previously unidentified areas where sex work is common. At least three new districts will be added in addition to new satellite or mobile clinics in existing Avahan supported districts. As new service delivery models are used to reach more dispersed groups of SWs, capacity building support (including operations research) will be needed to evaluate and adapt standards.

All partners are addressing barriers to *coverage and uptake*. The highest clinic utilisation rates have been seen in communities with active SW involvement in both outreach and clinic activities, and where there is good coordination and interaction of clinic and outreach staff (box 2). Additional efforts include local advocacy with police and gatekeepers, promotional events, and incentive schemes to motivate peer educators and SWs.

Following a first clinic visit, *continuation* depends on SWs appreciating the value of the services. The concept of routine check-ups to stay healthy is being actively promoted, but this will require more attention as interventions mature. DIC—with facilities for resting and washing on the same premises as the clinic—provide additional incentive for regular attendance.

Another priority is to expand the range of clinical services to better meet SWs' needs. In the initial phase, clinical services emphasised STIs while also treating minor ailments. As quality of these basic services improves, clinical staff and SWs are asking for additional services such as family planning, and HIV related counselling and care. Prophylaxis and management of opportunistic infections and tuberculosis case finding are also planned.

Better referral systems are needed. With high rates of HIV infection, the need to improve access to antiretroviral treatment (ART) for SWs is growing. As India increases

Box 2 Community mobilisation in Mysore, Karnataka

A community based programme in Mysore is run by the Karnataka Health Promotion Trust (KHPT), another Avahan state level partner. Community outreach and clinical services reach networks of female, male, and *hijra* (transgender) SWs, and their partners. The programme emphasises peer education, empowerment, and involvement of the SWs.

Clinical services include syndromic case management, counselling, regular health checks, and treatment for asymptomatic STIs. Medicines, with condoms and prevention information, are pre-packaged in six colour coded syndromic packs—white for genital ulcers, grey for cervicitis, etc.

Active community involvement in Mysore translates into high rates of clinic utilisation. Sex workers themselves participated early by mapping local hot spots with population size estimations at different times of the day. This information was used to develop outreach plans jointly with the SWs, a first step in development of a peer network in the community. The community also played a major part in conducting a community based behavioural and STI prevalence survey. Outreach teams were trained in sampling methods, contacted peers and accompanied them to the clinic, achieving high levels of participation in the survey.

Through involvement in these early activities, a growing number of peers and community members became more actively involved in other activities including selection of a location and staff for the clinic, establishment of a local community based organisation and advocacy with police. These efforts in turn further strengthened community involvement in the clinic and utilisation of services.

Summary prepared by Dr Sushena Reza Paul and the Mysore STI team.

Key messages

- Scale-up of clinic and outreach services to reach marginalised populations such as SWs is feasible.
- STI capacity building support is important to ensure standardisation and quality in large scale efforts.
- Active involvement of SWs in all aspects of outreach and service delivery builds trust and improves service utilisation.

capacity to provide ART in hospitals, referral linkages with Avahan clinics can be developed.

Finally, there are evolving data needs. Introduction of the computerised monitoring system with individual level data will facilitate standardisation and quality assurance through timely reporting and feedback to technical staff and project managers. Additional surveillance and operations research are planned.

In summary, initial experience under Avahan suggests that scale-up of quality STI/HIV services with SWs is feasible, but requires active community participation and coordinated capacity building efforts. In the face of rapid transmission seen among the most vulnerable and highest risk networks, such investments would likely be well worth the effort.[13]

CONTRIBUTORS

RS contributed to intervention design, implementation, analysis, and write up; VM provides capacity building support to Avahan, and contributed to analysis and write up; TEW leads the STI capacity building team, oversees all aspects of implementation, and contributed to analysis and write up; AKS and AD provide capacity building support to Avahan, and contributed to development of the manuscript; CCD, BG, GN, and VL provide technical assistance in intervention design and implementation, and reviewed the manuscript; GD contributed to intervention design, implementation, analysis, and write up.

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